Me. Jeanie McPall McPall & Associates Route 1, Bor 653 Ozark, MO 65721

Re: 2320 N. National

Dear Ms. McPall:

On February 16, 1988 personnel from this office smoke tested the City sanitary sewer behind your property at 2320 N. National. The City routinely smoke tests its sewer lines to find problem areas so they can be corrected. While doing this test we sometimes find problems with residential plumbing. At the address listed above, it appears that the drain in the bathtub is not properly trapped. This was confirmed by the fact that smoke was escaping into the house from the bathtub drain.

The fact that gases are entering the above residence from the sewer indicates that potentially serious health and safety hazards exist at that location. Some of the most common dangerous gases that exist in the sewer and their hazards (from the Manual of Instruction for Sewage Treatment Plant Operators) are:

Carbon Monoxide - Colorless, odorless, non-irritating. Flammable, explosive. Remoglobin of the blood has a strong affinity for the gas, causing oxygen starvation in the tissues.

Hydrogen - Colorless, odorless, tasteless, non-poisonous. Flammable, explosive. Propagates flame rapidly. Acts mechanically to deprive the tissues of oxygen. A simple asphyriant.

Methane - Colorless, odorless, non-poisonous. Flammable, explosive.

Hydrogen Sulfide - "Rotten egg" oder in small concentrations. Colorless, poisonous. Plasmable, explosive.

Carbon Dioxide - Colorless, odorless, non-flammable. Hot generally present in dangerous amounts unless there is a deficiency of exygen.

2320 N. NATIONAL

Ms. Jeanie McPall McPall & Associates Page 2 February 17, 1988

There are, of course, many other substances that can be present in the manitary sewer.

However, plumbing with all proper appurtenants and in good repair is designed to prevent sewer gas from venting back into the building. Steps should be taken to correct this problem as soon as possible.

If we can be of any further assistance, or if you have any questions, please don't hesitate to call at 864-1924.

You s truly

Gene Pabet

Water Pollution (Control Inspector III Surveillance & Enforcement

GP: JB

ccs: Robert R. Schaefer, P.E., Superintendent of Sanitary Services Henry Cole, P.E., Sanitary Engineer Randy Lyman, Sewer Surveillance and Billing Supervisor Darrell Whitt, 2320 M. National